

# ASAHIKLIN

## AsahiKlin™ AE3100E

### Product Description

Asahiklin AE3100E is a fluorinated solvent used for cleaning, alcohol drying, and dewatering. This Hydrofluoroether (HFE-347pc-f) is a nonflammable solvent that has excellent material compatibility, low surface tension, low Global Warming Potential, and Zero ODP.

### Applications

- Defluxing of electronics, electrical components, and printed wiring assemblies
- Precision cleaning of metals, alloys, composites, and plastics
- Drying agent after cleaning with hydrocarbons or alcohols
- Drying after wet plating and for Carbide Metal before coating
- Particle removal
- Replacement for HCFC, Dupont™ Vertrel®, & 3M™ Novec™ solvents

### Benefits

- Non-flammable
- Non-corrosive
- Low global warming potential (GWP)
- Zero ozone depletion potential (ODP)
- Excellent thermal, chemical, and hydrolytic stability
- Low surface tension, low viscosity, high liquid density
- Superior drying property
- Excellent permeability
- Recyclable
- Recoverable by simple distillation
- Can be used with ultrasonics
- No surfactants necessary

### Material Composition

1,1,2,2-tetrafluoroethyl-2,2,2-trifluoroethyl ether	92-97 %
Ethanol	3-8%

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### Physical Properties

Boiling Point	54°C (129.2°F)
Melting Point	-86°C (-122.8°F)
Density (g/cm <sup>3</sup> , 25°C)	1.40
Viscosity (cST, 25°C)	0.43
Surface Tension (dyne/cm/ 25°C)	16.1
Specific Heat (kJ/kg K, 25°C)	1.49
Latent Heat of Vaporization (KJ/kg, 51°C)	187
Relative Evaporation Rate (Ether=100)	66
Flash Point (Open/Closed Cup)	None
Vapor Pressure (kg/cm <sup>2</sup> , 25°C)	0.28

### Cleaning Procedures

It is recommended that Asahiklin AE3100E be used in a vapor degreaser to optimize cleaning efficiency, economy, and emission control. Cleaning procedures for Asahiklin AE3100E are quite similar to those of AK225 products. The procedures consist of immersing a workload into the boiling solvent, rinsing, or spraying with cool solvent and drying in solvent vapor.

### Material Compatibility

Asahiklin AE3100E has a broad range of compatibilities

#### Effect of Asahiklin AE3100E on Unstressed Plastics and Elastomers at Boiling Point.

	At boiling for 3 days	
	Weight change (%)	Linear Swell (%)
Polypropylene	<2.5	<2.0
Polystyrene	<2.0	<1
Polymethyl methacrylate	affected	affected
ABS	<7.5	<2.5
PTFE	<2.5	<2.5
Fluoroelastomer	>69	>21
Silicon Rubber	<20	<5.0
EPDM	<0.1	<0.1

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### Environmental Properties

Properties	Asahiklin AE3100E
Ozone Depletion Potential (ODP) <sup>1</sup>	None
Global Warming Potential (GWP) <sup>2</sup>	*580
Flash Point	None

<sup>1</sup> CFC-11 = 1.0

<sup>2</sup> CO<sub>2</sub> = 1.0, 100yr ITH

\* Calculated value by the AIST

### Environmental Health and Safety

Please read the current product Material Safety Data Sheet (available through your AGCCA technical service representative) and the precautionary statement on the product package prior to use. Follow all applicable precautions and directions.

ASAHIKLIN AE3100E is nonflammable. The solvent acts as an azeotrope and is resistant to thermal breakdown and hydrolysis during storage and use. Recommended handling procedures are provided in the Material Safety Data Sheet, which is available from your AGCCA representative upon request.

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